

**MSDS 092598 REV 12/16/1998**

Image Data From SunHealth

**FERRIC CHLORIDE, 41°Be**  
**MATERIAL SAFETY DATA SHEET**

INTEGRA Chemical Company  
710 Thomas Ave SW  
Renton, WA 98055  
Phone: 425-277-9244  
24 Hour Emergency Response Telephone: 800-451-8346

MSDS Number: F204  
Revision Date: 16-Dec-98 ✓  
Revision Number: 002

Page 1

**Product Identification**

Product Name: FERRIC CHLORIDE, 41°Be  
Synonyms: Iron chloride solution  
Chemical Formula: Mixture  
Formula Weight: NA  
Chemical Family: Aqueous solution  
Integra Product Numbers: F204.50

**Hazard Overview**

HMIS Rating: 2-0-1-C NFPA Rating: NE  
Warning Label:

**DANGER!**

Corrosive. Causes burns. Do not get in eyes, on skin or on clothing. Harmful if swallowed. Mist is irritating to the eyes, nose, throat and respiratory system. Use only with adequate ventilation.

**Components**

Component	CAS #	%
Water	07732-18-5	55-63
Ferric chloride	07705-08-0	37-45
Hydrochloric acid	07647-01-0	<0.9
Ferrous chloride	13478-10-9	<0.5

**Physical Data**

<u>Boiling Point:</u>	110 °C	<u>Specific Gravity:</u>	1.43 Water=1
<u>Melting Point:</u>	-50 °C	<u>Evaporation Rate:</u>	NA
<u>Vapor Pressure:</u>	NA	<u>Vapor Density:</u>	NA Air = 1

Solubility:

Miscible with water.

Appearance and Odor:

Orange-brown liquid; slightly acidic odor.

**VENDOR** 005734**MSDS#** 92598  
Tw**Fire and Explosion Data**

Flash Point: NA Test Method:  
Auto-ignition Temperature: NA  
Flammable Limits (% by volume in air) Upper: NA Lower: NA

Fire Extinguishing Media:

Material is not flammable. Use extinguishing media suitable to surrounding materials.

Special Firefighting Procedures:

Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

Unusual Fire and Explosion Hazards:

None identified

**Health Hazard Information**Effects of Overexposure

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Page 2

**Health Hazard Information**

Skin Contact:

Corrosive material. Contact may cause severe burns.

Eye Contact:

Contact may burn or damage the eyes.

Ingestion:

May be harmful if swallowed. May cause burns to the mouth, throat and gastrointestinal tract.

Inhalation:

Harmful if inhaled. Vapors and mists are corrosive to the mucous membranes.

Chronic Effects of Overexposure:

None Identified

Exposure Limits:

	<u>TWA</u>	<u>OSHA PEL</u> <u>STEL</u>	<u>Ceiling</u>
Water	NE	NE	NE
Ferric chloride	NE	NE	NE
Hydrochloric acid	NE	NE	5 ppm
Ferrous chloride	NE	NE	NE

	<u>TWA</u>	<u>ACGIH TLV</u> <u>STEL</u>	<u>Ceiling</u>
Water	NE	NE	NE
Ferric chloride	(as Fe) 1 mg/m3	NE	NE
Hydrochloric acid	NE	NE	5 ppm
Ferrous chloride	(as Fe) 1 mg/m3	NE	NE

Toxicity Data:

Water	No information available	
Ferric chloride	LD50 (oral, rat)	1932 mg/kg
Hydrochloric acid	LC50 (inhalation, rat)	3124 ppm/1H
	LD50 (oral, rat)	900 mg/kg
	LD50 (intraperitoneal, mouse)	40 mg/kg
Ferrous chloride	LD50 (oral, rabbit)	890 mg/kg

Medical Conditions Generally Aggravated by Exposure:

None Identified

Target Organs:

Liver, kidneys.

Reproductive Effects:

None Identified

Carcinogenicity:

None Identified

<u>Component</u>	<u>NTP Listing</u>	<u>IARC Listing</u>	<u>OSHA Regulated</u>
Water	No listing	No Listing	<input type="checkbox"/>
Ferric chloride	No listing	No Listing	<input type="checkbox"/>
Hydrochloric acid	No listing	No listing	<input type="checkbox"/>
Ferrous chloride	No listing	No Listing	<input type="checkbox"/>

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Page 3

**Emergency First Aid Procedures**Skin Contact:

Immediately remove contaminated clothing. Flush skin with water for at least 15 minutes. Seek immediate medical attention.

Eye Contact:

Immediately flush eyes with large amounts of water, holding lids apart to ensure rinsing of entire surface. Washing eyes within several seconds of contact is essential to achieve maximum effectiveness. Get immediate medical attention.

Inhalation:

Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

Ingestion:

Do not induce vomiting. If victim is conscious, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Additional First aid and Treatment Notes:

No information available

**Reactivity Data**

Stability: Stable  
Hazardous Polymerization: Will Not Occur

Incompatibles:

Incompatible with strong bases and strong oxidizers

Decomposition Products:

None identified

Conditions to Avoid:

None identified

**Spill and Disposal Procedures**Spill and Leak Procedures:

Prevent spread of spill. Neutralize with soda ash or lime and sweep or scoop into suitable disposal container. Flush residues with water. Wear full protective equipment.

Disposal Procedures:

Dispose in accordance with all Local, State and Federal regulations.

**Protective Equipment**Ventilation:

Use general or local exhaust ventilation to meet TLV and PEL requirements.

Respiratory Protection:

Respiratory protection required if airborne concentrations exceed PEL or TLV. A chemical cartridge respirator with an acid/organic cartridge is recommended.

Skin and Eye Protective Equipment:

Safety goggles, protective clothing and gloves. Maintain an eyewash station and safety shower nearby.

**Storage and Handling Precautions**

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Page 4

**Storage and Handling Precautions**Storage Area: CORROSIVE, ACID

Store in a cool, dry, corrosive materials storage area. Minimize exposure to air and light. Protect containers from physical damage.

**Transportation Information**☒ *Regulated Material domestic ground transportation*

(reference: CFR Title 49, Transportation)

Proper Shipping Name: Ferric chloride solution

UN or NA Identification number: UN2582

Hazard Class and Label: 8 Corrosive

Packing Group: III

Subsidiary Risk and Label:

☒ *Regulated Material via Air Transportation*

(reference: ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air)

Proper Shipping Name: Ferric chloride solution

UN Identification Number: UN2582

Hazard Class and Label: 8 Corrosive

Packing Group: III

Subsidiary Risk and Label:

Packing Instruction Max net qty per package

Passenger Aircraft: 818/Y818

5/1 L

Cargo Aircraft: 820

60 L

**Regulatory Information**

Component	<u>TSCA</u> <u>Inventory</u>	<u>CERCLA</u> <u>RQ</u>	<u>SARA EHS</u> <u>TPQ</u>	<u>SARA 313 Toxic Release</u> <u>de minimus</u>
Water	<input type="checkbox"/>	lbs	<input type="checkbox"/>	lbs
Ferric chloride	<input checked="" type="checkbox"/>	1000 lbs	<input type="checkbox"/>	lbs
Hydrochloric acid	<input checked="" type="checkbox"/>	5000 lbs	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 lbs
Ferrous chloride	<input checked="" type="checkbox"/>	lbs	<input type="checkbox"/>	lbs
<u>SARA Hazard Categories:</u>	<u>Acute</u>	<u>Chronic</u>	<u>Flammability</u>	<u>Pressure</u>
Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ferric chloride	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrochloric acid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ferrous chloride	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Clean Air Act Categories:</u>	<u>SOQMI</u>	<u>HAP</u>	<u>Volatile HAP</u>	<u>Organic HAP</u>
Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ferric chloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrochloric acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ferrous chloride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**MSDS Revision History:**

002 - Changed header phone number

NE = Not established, NA = Not applicable or Not available

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